

REMARKS

Applicants thank the Examiner for the complete examination of the application. Claims 1-34 are now present in this application. Claims 1, 18, 19, and 20 are independent. By this amendment, claims 1, 3, 18-20, and 29 have been amended, and claims 35-38 have been added.

Reconsideration of this application, as amended, is respectfully requested.

Information Disclosure Citation

Applicants thank the Examiner for considering the references supplied with the Information Disclosure Statement filed July 12, 2007, and for providing Applicants with an initialed copy of the PTO-1449 or PTO-SB08 form filed therewith.

Rejections under 35 U.S.C. §103

Claims 1-4, 14, 17, 18, 22, 25-29, and 34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hockh in view of either Fraraccio or Koblenzer; claims 5, 23, and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the references applied to claims 1 and 18 in view of Mollinari; claims 6-10, 13-16, 30, and 33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the references applied to claims 1 and 18 in view of either Violi or Treber; claims 11 and 32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the references applied to claims 1 and 18 in view of Groom; claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the references applied to claims 1 and 18 in view of Pickering. These rejections are respectfully traversed.

Complete discussions of the Examiner's rejections are set forth in the Office Action, and are not being repeated here.

At the outset, Applicants submit that Hockh is not directed to a steam drum washing machine or methods of washing using steam. Rather Hockh discloses a cleaning and drying system, particularly a system for cleaning and drying stock items, such as work pieces that have been mechanically shaped, e.g., by turning or stamping. In stark contrast, the present invention is directed to methods of washing using a steam drum **laundry** machine and the steam drum laundry machine itself. One of ordinary skill in the art would not view Hockh as being related to laundry machines.

Moreover, according to the present invention, steam is provided to a drum for increasing the inside temperature of the drum and to supply moisture to the laundry placed in the drum, thereby rapidly soaking the laundry in water, reducing the amount of waste water and electricity used to wet the laundry, and improving sterilization and washing efficiencies of the laundry machine.

On the other hand, Hockh only discloses that steam is supplied into a cleaning chamber during the drying process. In particular, the superheated steam is provided into the cleaning chamber to dry the stock. Consequently, the superheated steam is provided to remove moisture from the stock items and **not** to supply moisture to laundry. Therefore, the purpose of the superheated steam in Hockh is in direct contrast with the purpose of supplying steam in the present invention. Therefore, the reference as a whole teaches away from the claimed invention.

With these initial comments in mind, Applicants respectfully submit that independent claims 1 and 18 are allowable over Hockh and Hockh in combination with either Fraraccio or Koblenzer.

Applicants respectfully submit that independent claim 1 is directed to a combination of elements in a washing machine including “a casing”, “a tub disposed in the casing and adapted so that water is supplied into the tub”, “a drum rotatably mounted in the tub and adapted so that clothes are put in the drum and the water is supplied into the drum”, “a steam generator to heat water to obtain steam and to supply the steam into the tub and the drum”, and “a water-supply unit to supply the water into the tub and to the steam generator.”

Similarly, independent claim 18 is directed to a combination of elements in a washing machine including “a tub disposed in a casing and adapted so that water is supplied into the tub”, “a drum rotatably mounted in the tub and adapted so that clothes are put in the drum and the water is supplied into the drum”, “a water-supply unit disposed at one side of the tub for supplying the water into the tub and the drum”, and “a steam generator connected to the water-supply unit for heating the water to obtain steam, and supplying the steam into the tub and the drum.” The water-supply unit includes “a water-supply tube connected at one end thereof to the steam generator for supplying the water into the steam generator” and “a steam tube having one end connected to the steam generator and the other end disposed in the tub and the drum for supplying the steam into the tub and the drum.”

Regarding independent claim 1, the Office Action states that Hockh discloses “a steam generator (80)” and “a water supply unit (46) to supply the water into the tub and to the steam generator” and that Hockh differs from the claim only in the recitation of the casing and the washing of clothes.

Applicants respectfully submit that Hockh fails to disclose the claimed washing machine including “a water-supply unit to supply the water into the tub and to the steam generator.” In particular, the Office Action relies on element or line 46 as teaching the claimed water supply unit. The line 46 cannot be the claimed water supply unit because Hockh’s line does not supply water to both the cleaning vessel 11 and the overpressure container 80. Specifically, at col. 5, lines 48-54, Hock describes that during the washing operation, “the washing fluid is supplied from the aqueous washing fluid reservoir through line 46, the open three-way valve 26, the circulation pump 27 and the open shut-off valve 31 in line 46a to the spray tube 48 in the cleaning chamber 10 to flow over the stock contained in the stock basket.” Hockh further states “[a]s soon as the liquid level in the cleaning chamber 10 has reached the liquid level detector 11b, the supply of cleaning fluid is discontinued.” At no point is line 46 in communication with the overpressure chamber 80 (see the figure of Hockh). Rather, “[a]fter rinsing, the condensing water is collected via a line 65 as well as the valve 62 in a reservoir 63 and can be transferred periodically by means of a pump 64 and via the valve 63a and the line 86 into the overpressure container 80 for the generation of steam.” See col. 5, lines 35-40.

Therefore, Hockh at least fails to disclose the claimed water-supply unit. The remaining references were cited for teachings unrelated to the features of the water-supply unit and therefore, any hypothetical combination set forth in the Office Action fails to overcome the deficiency identified above with respect to Hockh. For at least this reason, the § 103 rejection of claim 1 should be withdrawn.

Regarding claim 18, the Office Action states Hockh discloses “a water-supply unit disposed at one side of the tub for supplying the water into the tub and the drum” and the water supply unit includes “a water-supply tube (46, 86) connected at one end thereof to the steam generator for supplying the water into the steam generator” and “a steam tube (84) having one end connected to

the steam generator and the other end disposed in the tub and the drum for supplying the steam into the tub and the drum”

As described above, Hockh fails to show or describe the over pressure container 80 connected to line 46. Therefore, the Office Action’s characterization of the line 46 and line 86 being a water-supply tube cannot be supported. For at least the same reasons above regarding independent claim 1, the § 103 rejection of independent claim 18 cannot be maintained.

With regard to dependent claims 2-17 and 21-34, Applicants submit that these claims depend, either directly or indirectly, from one of independent claims 1 and 18, which are allowable for the reasons set forth above, and therefore these claims are also allowable for at least the same reasons as independent claims 1 and 18, as well as for their additional subject matter. Reconsideration and allowance thereof are respectfully requested.

For example, with regards to claims 5 and 25, the claimed invention further includes “a gasket located between the tub and the casing and wherein the end of the steam tube penetrates through the upper end of the gasket.”

As shown in FIG. 4 of the present invention, an end 62’ of a steam tube 62 penetrates through the upper end of a gasket 57, which prevents leakage of water between the tub 56 and the casing 52 (see p. 11, lines 16-19.)

In contrast, as shown in the figure of Hockh, line 84a is connected directly to the cleaning vessel 11. Therefore, there is no concern for leakage of steam provided through line 84a. Furthermore, the seal 112 of Mollinari, which the Examiner relies on as teaching the claimed gasket, is provided between a pipe 110 and an end 10a of the tank. There is nothing in Mollinari that shows a gasket located between a tub and a casing as claimed. Rather, the seal 112 is on an exterior surface of the apparatus as opposed to being between two structures.

Allowable Subject Matter

The Office Action states that claim 19 is allowed and that claim 20 would be allowable if rewritten would be allowable if rewritten in independent form. Applicant thanks the Examiner for the early indication of allowable subject matter in this application. Objected-to claim 20 has been rewritten into independent form, and should therefore be allowed.

Claims 35-38

Claims 35-38 have been added for the Examiner's consideration. Applicants submit that claims 35-38 depend, either directly or indirectly, from one of independent claims 19 and 20, and are therefore allowable based on their dependence from one of claims 19 and 20, which are believed to be allowable.

In addition, claims 35-38 recite further limitations which are not disclosed or made obvious by the applied prior art references.

Additional Cited References

Since the remaining references cited by the Examiner have not been utilized to reject the claims, but have merely been cited to show the state of the art, no comment need be made with respect thereto.

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

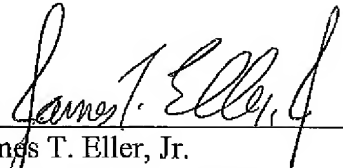
If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Chad D. Wells, Registration No. 50,875, at (703) 205-8000, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 

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